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| Brooklyn College |
| The Integration of Smartboards in the ESL English Language Instruction |
| Education 7201:Seminar in Applied Theory and Research |
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| **Eileen Blair** |

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Table of Contents

**AbstractX**

**Introduction3**

**Statement of the Problem4**

**Review of the Literature4-8**

**Statement of the Hypothesis9**

**Method9-10**

**Participants (N)** **9**

**Instrument(S)9-10**

**Experimental DesignX**

**ProcedureX**

**ResultsX**

**DiscussionX**

**ImplicationsX**

**References11-13**

**Appendix (ces)14-17**

**Appendix A: Parent Consent Form14**

**Appendix B: Principle Consent Form15**

**Appendix C: Teacher Consent Form16**

**Appendix D: Pre-test/Post-test17**

**Abstract:**

**Introduction:**

The population of ESL students has increased throughout the New York City public school system, and continues to rise. The ESL student population suffers from performance anxiety and a lack of verbal communication skills due to language barriers. Students experience discomfort when speaking among native English speakers, in fear of making a mistake in pronunciation, usage, or comprehension (Long, 2008). In order for ESL students to learn and master the English language, the learning atmosphere must provide comfort and encourage student interaction and verbal communication. The environment must promote student participation and motivation to learn. The learning of a language must take place in a low-anxiety environment (Johns & Tórrez, 2001). Students need a learning environment that encourages the usage of verbal communication skills. The ESL student population must overcome performance anxiety, and improve their ability to communicate using the English language, in order to become contributing members of society (Lee, 2006). It is believed that technology, in particular, the Smartboard, has the ability to provide ESL students with a rich learning environment, and ultimately help ESL students to master the English language. Technology has had a major impact on education, in particularly, the education of ESL students. Educators find that the Smartboard is responsible for a revolutionary change in the way in which teachers educate students, and believe the Smartboard is one the most significant advancements in education (Branzburg, 2007; Lee, 2010).

**Statement of the Problem:**

The ESL student population suffers from performance anxiety and lack of verbal communication skills due to language barriers (Long, 2008). Students experience discomfort when speaking among native English speakers, in fear of making a mistake in pronunciation, usage, or comprehension. ESL students need a learning atmosphere that provides comfort and promotes student interaction and involvement. The learning environment must encourage the usage of verbal communication skills.

**Literature Review**

*The Pros:*

Technology has had a major impact on the education system (Cummins, 2000; Green, 2005; Lacina, 2004). It has been found that technology helps to promote verbal interaction and communications skills among ESL students. It provides opportunities for cooperative learning, which also promotes social interaction, and creates a rich learning environment (Beckett, Wetzel, Chisholm, Zambo, Buss, Padgett, & Odom, 2006). Technology –based learning tools help to create an atmosphere conducive for learning language, by creating a low- anxiety setting (Johns& Tórrez, 2001). Anxiety is a major obstacle for ESL students, as they fear using the English language incorrectly, which hinders the students from practicing the language, and ultimately interferes with their ability to master the English language (Long, 2008). Social interaction through the use of technology-tools, such as the Smartboard, motivates ESL students to use the English language, while also increasing an overall motivation to learn. The ESL students are able to then practice using the English language, and ultimately become more comfortable with the language, which improves their ability to communicate (Wen-chi Vivian & Marek, 2010; Wood & Ashfield, 2008; Zuger, 2009). The average ESL student needs a variety of language experiences that encourages speaking, reading, writing, and hearing English. A technology tool, such as the Smartboard, is an excellent supplemental tool in teaching the language, and offers the students a number of language experiences (Green, 2005). There have been a number of studies conducted, in which researchers studied the impact of technology on the learning outcomes of ESL students, by infusing technology into the language instruction, and conducting interviews, observations, and surveys (Traore & Kyei-Blankson, 2011;Wen-chi Vivian & Marek, 2010; Wood & Ashfield, 2008). It was found that technology –infused instruction usually results in an increase in academic performance, in willingness to participate, and use of language for personal expression for low-economic status students (Amiri, 2009; Zha, Kelly, & Park, 2006). The ESL students struggle when learning content topics, because of the cultural issues, as the content is often based on cultural experiences which ESL students cannot relate to, or find boring. Through the use of technology teaching tools, a teacher can help a student to discover, interpret, and translate cultural meanings and to understand the appropriate use of the language. Technology helps to create a cultural, social, and linguistic bridge for diverse students who are learning English (Bao, 2006; Chatel, 2002; Cummins, 2000; Long, 2008; Traore & Kyei-Blankson, 2011).

*The Cons:*

While technology does prove to be effective in teaching ESL students the English language, there are many obstacles to overcome, when integrating education with technology-tools. Many schools do not have access to technology-teaching tools due to the expense, and in which case, teachers must find alternatives. The average cost of an interactive Smartboard is about $3000 (Lee, 2006; Phillips, 2008; Roblyer & Knezek, 2003). The level of skill and professional knowledge of the teacher plays a major part in the effectiveness and usefulness of technology tools, such as the Smartboard. Many teachers are intimidated by the Smartboard, and lack the knowledge and training in using the Smartboard effectively. The teachers must use this technology in their classroom effectively, so that it is not viewed as a waste of the educational budget. The teacher must understand how to use such a tool to build upon the ESL students’ tactile abilities, and promote their verbal interaction skills. There have been a number of studies conducted, in which teachers are observed and interviewed on their ability to use technology, and their opinion of technology-infused instruction (Beckett et al., 2006; Coyle, Yañez, & Verdú, 2010; Smith & Owens, 2010; Traore & Kyei-Blankson, 2011). The results differ based on the number of years of experiences the teachers had, and the amount of training they had received. These studies have confirmed that there are too many teachers that fear the use of technology in instruction. It is believed that software programs and training must be provided for educators, as technology is a valuable tool in teaching the English Language. The education preparation programs need to redirect their focus on technology in education. A major issue found was that teachers find other priorities in the classroom compete with time to implement technology. This implies that teachers emphasize teaching what the kids are tested on, rather than spending time on technology (Aziz, 2008; Lacina, 2004; Lee, 2006; Phillips, 2008; Wood & Ashfield, 2008; Zuger, 2009).

*The Smartboard:*

The Smartboard is responsible for a revolutionary change in the way in which teachers educate students, moving schooling from traditional paper-based form to digital (Lee, 2010). The Smartboard is one of the most significant developments in the education system in the history of schooling (Branzburg 2007, Lee 2010). There are many different companies that make the Smartboard, however the function and utility is generally the same. The Smartboard or the whiteboard allows the students or the teacher to use a pen or their finger to write on the board. This means during different presentations, teachers can highlight different areas, using their pen. The Smartboard allows teachers to transform standard graphic organizers into an interactive activity. Students can interact with the graphic organizer on the whiteboard, using the pen, for both sorting and writing information. The whiteboard has the ability to record as well. Teachers can use this feature to record short films or videos with the students (Coyle et al., 2010; Lee, 2010). There are number of interactive programs designed for the whiteboard as well. These are just a few of the many uses of the whiteboard in the classroom. It can be used for whole-class or group instruction. The Smartboard has the potential to have a very positive impact on classroom interaction. Students can visualize what they are learning, and focus their attention on the content and tasks on screen. It is believed to be especially promising for ESL students in comprehension and promoting learning through verbal interaction, including both listening and talking. It was found that the Smartboard captured and held the children’s attention, enabled concentration, and provided motivation to learn. It was also noted that the resources on the Smartboard provided good visuals for the “visual” learners (Traore & Kyei-Blankson, 2011; Wood & Ashfield, 2008). Students are able to make connections after studying visuals while also helping the students to reduce anxiety and become more comfortable with the concepts. The audio-visual tools, as well as listening tools, are also help students to improve their comprehension skills, and promote critical thinking and analysis (Branzburg, 2007; Coyle et al., 2010; Lee, 2010; Spezzini, 2010; Traore & Kyei-Blankson, 2011; Wood & Ashfield, 2008).

*Theorists:*

The impact of technology has had a major effect on how many educators believe ESL children are to be taught the English language. Many educators are infusing their instruction with technology, and find that students’ language abilities are improving. This argument supports the constructivism view of education. Constructivism, founded by Piaget, is defined as a theory in which ideas are formed through a more personal process (Powell & Kalina, 2009). Social constructivism, founded by Vygotsky, emphasizes that ideas are constructed through social interaction (Powell & Kalina, 2009). Both theories support inquiry based learning, and believe that children learn by building on their existing knowledge. They both support the idea that children must construct their own knowledge and meaning. Technology based learning tools, such as the Smartboard, provides students with an opportunity to construct their own knowledge, while also providing opportunities for social interaction. The interactive Smartboard promotes student participation, motivation, and communication within the classroom. The Smartboard is an excellent tool for teaching ESL students the English language, based on the ideas of social constructivism (Powell, & Kalina, 2009).

**Statement of the Hypothesis:**

HR1: Integrating Smartboards in sixth grade ESL English Language Arts curriculum in P.S. X, in Brooklyn, New York, for a six week period, three times a week, for 45 minutes per day, in one class of 26 students, will improve the ESL students’ verbal interaction skills.

HR2: Integrating Smartboards in sixth grade ESL English Language Arts curriculum in P.S. X, in Brooklyn, New York, for a six week period, three times a week, for 45 minutes per day, in one class of 26 students, will decrease anxiety.

**Method**

**Participants:**

The participants will consist of a group of 26 students from P.S. X, a low-income urban school in, Brooklyn, New York. The population consists of Hispanic, Asian, Pakistani, and Russian students. The class chosen will be a sixth grade class that consists of mainly ESL students.

**Instruments:**

The students will be profiled prior to Smartboard –infused instruction. The English Langauge Arts teacher will be asked to rate each student (1-4) through the use of a pre-made form on the following factors:

1. Comfort level in the classroom
2. Ability to use the English language to communicate socially
3. Enthusiasm about learning
4. Involvement and participation in learning
5. Dedication
6. Determination
7. Nervousness/Shyness
8. Writing ability

The ELA teacher will also be interviewed and asked about each student. They will be asked to elaborate on the student’s ability and willingness to participate, evidence of performance anxiety, and their ability to communicate both verbally and through writing. Notes will be taken on each student. After observing students throughout the Smartboard-infused instruction for one period of 45 minutes, for 3 times a week, for 6 weeks, I will conduct a post-test. Students will complete a survey. The ELA teacher will re-profile the students, to document any improvement. The ELA teacher will also be interviewed to elaborate on any major differences she/he has witnessed in the students’ ability to communicate, willingness to participate, performance anxiety, and ability to use the English language.

**Experimental Design:**

**Procedure:**

**Results**

**Discussion**

**Implications**

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**Appendix A**

Appendix A: Parent Consent Form

Dear Parents,

I am currently a graduate student in the Childhood Education Masters program at Brooklyn College. I am conducting a study in which I am researching if the use of the Smartboard will help reduce performance anxiety of ESL students. I am also researching if the use of the Smartboard promotes the ESL students to use the English Language and participate in verbal communication. I am requesting your permission to use your child’s data for my research study. All instruction will take place within your child’s regularly scheduled English Language Arts (ELA) class period. The students will be taught the sixth-grade ELA curriculum and will meet the same learning objectives as the rest of the grade. The English Language instruction used will be infused with the Smartboard.

All results for this study will be reported as a group study therefore, participants’ names and information will remain anonymous. If you have any questions or concerns, please feel free to email me at [Eileen.Blair87@gmail.com](mailto:Eileen.Blair87@gmail.com) or call at 917-453-8765.

Thank you for your support!

Sincerely,

Eileen Blair

I give my child \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ permission to be part of the research study.

Parent’s Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Appendix B**

Appendix B: Principle Consent Form

Dear Principle,

I am currently a graduate student in the Childhood Education Masters program at Brooklyn College. I am conducting a study in which I am researching if the use of the Smartboard will help reduce performance anxiety of ESL students. I am also researching if the use of the Smartboard promotes the ESL students to use the English Language and participate in verbal communication. I am requesting your permission to use your students’ data for my research study. I am requesting to use one class of ESL sixth-grade students, in which I will infuse instruction with the Smartboard, for one 50 minute period, 3 times a week, for 6 weeks. All instruction will take place within the student’s regularly scheduled English Language Arts (ELA) class period. The students will be taught the sixth-grade ELA curriculum and meet the same learning objectives as the rest of the grade. The English Language instruction used will be infused with the Smartboard.

All results for this study will be reported as a group study therefore, participants’ names and information will remain anonymous. If you have any questions or concerns, please feel free to email me at [Eileen.Blair87@gmail.com](mailto:Eileen.Blair87@gmail.com) or call at 917-453-8765.

Thank you for your support!

Sincerely,

Eileen Blair

I give the student \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ permission to be part of the research study.

Principle’s Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Appendix C**

Appendix C: Teacher Consent Form

Dear Teacher,

I am currently a graduate student in the Childhood Education Masters program at Brooklyn College. I am conducting a study in which I am researching if the use of the Smartboard will help reduce performance anxiety of ESL students. I am also researching if the use of the Smartboard promotes the ESL students to use the English Language and participate in verbal communication. I am requesting your permission to use your class for my research study. I am requesting to use one class of ESL sixth-grade students, in which I will infuse instruction with the Smartboard, for one 50 minute period, 3 times a week, for 6 weeks. All instruction will take place within the student’s regularly scheduled English Language Arts (ELA) class period. The students will be taught the sixth-grade ELA curriculum and meet the same learning objectives as the rest of the grade. The English Language instruction used will be infused with the Smartboard. I am requesting to use your class’s data for the research study.

All results for this study will be reported as a group study therefore, participants’ names and information will remain anonymous. If you have any questions or concerns, please feel free to email me at [Eileen.Blair87@gmail.com](mailto:Eileen.Blair87@gmail.com) or call at 917-453-8765.

Thank you for your support!

Sincerely,

Eileen Blair

I give the student \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ permission to be part of the research study.

Teacher’s Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Appendix D**

Appendix D: Pre-test/ Post-test

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| **Directions**: Rate students using the following rating system: 4 = Always, 3= Most of the time, 2= Some of the time, 1 = None of the time, NS= not sure | | | | | | | | | | |
|  | Factors to be Measured | | | | | | | | | |
| Student | Comfort level in the classroom | Ability to use the English language to communicate socially | Enthusiasm about learning | Involvement and participation in learning | Dedication | Determination | Nervous | Writing ability | Shyness | Evidence of Anxiety |
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